

Measuring Missouri's Public Health Preparedness Success



Missouri Department of Health and Senior Services
January 2007





Missouri Department of Health and Senior Services
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Jane Drummond
Director



Matt Blunt
Governor

January 2007

Dear Friends,

The Missouri Department of Health and Senior Services has experienced great success during the past grant year (September 1, 2005 to August 30, 2006) and has made significant advances in preparing Missouri for a public health emergency resulting from a natural disaster, major accident, or terrorist attack. *Measuring Missouri's Public Health Preparedness Success* outlines many of these advances.

Measuring Missouri's Public Health Preparedness Success outlines the key accomplishments of the department's progress in strengthening Missouri's public health preparedness capacity, highlights the successes, and describes how funding was spent on public health, hospital, and laboratory preparedness.

The Department of Health and Senior Services along with our state, local, and federal partners in public health preparedness have worked to better prepare Missouri for future emergencies and secure the safety of Missouri communities while remaining a national leader in the preparedness arena, primarily through federal funding from the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA).

I commend the accomplishments of our partners throughout state government, local government, professional associations, and others who have supported these efforts. We look forward to continuing our efforts to protect the lives and health of all Missourians from natural and man-made public health threats.

Sincerely,

A handwritten signature in black ink, appearing to read "Jane Drummond".

Jane Drummond
Director

www.dhss.mo.gov

Healthy Missourians for life.

The Missouri Department of Health and Senior Services will be the leader in promoting, protecting and partnering for health.

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER: Services provided on a nondiscriminatory basis.

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Department Situation Room

The Department Situation Room (DSR) is staffed by a duty officer 24 hours a day, 7 days a week, and monitors the day-to-day emergency preparedness of the state. A toll-free number (800-392-0272) is available around-the-clock for emergencies, disease reporting, and addressing concerns from the general public. The DSR serves as a command center during emergencies. Six teams of the Department of Health and Senior Services' professionals are trained and ready to respond to the DSR and the State Emergency Operations Center (SEOC) immediately.

The web-based EMSSystem is a hospital-tracking resource used to detect possible outbreaks and mass casualty incidents by monitoring Missouri hospitals' emergency departments and provides a channel for instant messages and health and amber alerts. The system is also used as a tool to address a regulatory requirement to report emergency room diversions of more than eight hours to the department. The DSR also watches for unusual activity in the emergency departments, making contact with hospitals to determine the cause.

A Departmental Response Management System (DRMS) email account is monitored 24 hours a day, 7 days a week for CDC alerts, amber alerts, and other sensitive correspondence. DHSS health alerts, advisories, updates, and guidances are also emailed from this address.

The Department Situation Room is staffed by a duty officer 24 hours a day, 7 days a week, and monitors the day-to-day public health emergency preparedness of the state.



The St. Louis Welcome Center was set up to receive Gulf Coast residents and offer them everything from medical care and clothes to recreation and Internet access.

Hurricane Katrina

In September 2005, DHSS expanded its daily operations and services in an effort to provide assistance to persons displaced by Hurricane Katrina. While hurricane response is not something that DHSS typically trains for, preparation for other public health emergencies and terrorist attacks allowed the department to quickly respond to this event.

During the hurricane relief efforts, the DHSS' DSR operated 24 hours a day, 7 days a week as a command and control center for public health issues.

The DSR hotline received calls from

licensed medical professionals willing to volunteer to assist individuals affected by this disaster. DHSS also worked with numerous organizations across the state offering facilities and supplies for temporary shelters to displaced individuals including ambulance services and long-term care facilities.

In addition, a mini-city was prepared to accept 2,000 displaced Gulf Coast residents and offer them everything from medical care and clothes to recreation and Internet access. The St. Louis Welcome Center was created as a result of a partnership among the State of Missouri, City of St. Louis and airport authorities, city and federal agencies and many local organizations including the United Way, American Red Cross, Salvation Army, Mers Goodwill and many more.

The Emergency Notification System (ENS) provides an automated message to identified public health personnel advising them of an emergency event and action required. The ENS places up to 24 calls at one time, running through cell, work, home, and pager numbers until the individual responds. A report is generated immediately identifying the individuals' responses to the call so the DSR can determine who is available to respond to an event.

The department is prepared to quickly expand its hotline capabilities by 22 additional lines, with trained DHSS



Six teams of DHSS professionals are trained and ready to respond to the DSR and the State Emergency Operations Center (SEOC) immediately.

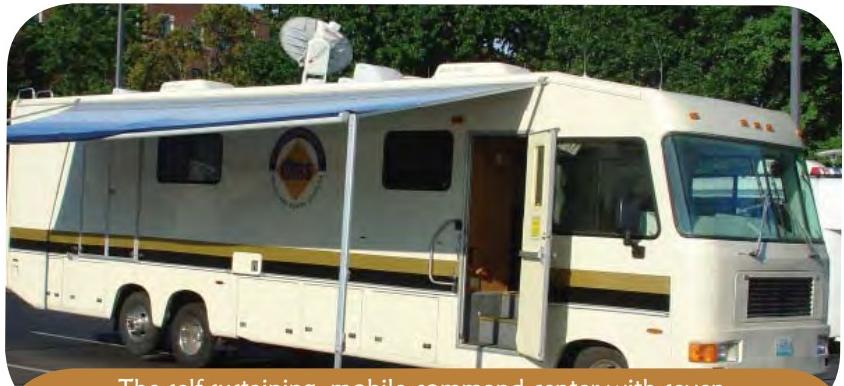
staff and nurses available through a 24 hours a day, 7 days a week call-down list. In addition, DHSS staff operating the 14 elderly information lines will field calls.

Fifteen satellite phones are strategically placed around the state in case land lines and cell towers are inoperable. Three satellite phones

have data-line capabilities to allow the transfer of data. The DSR and key DHSS staff also have Government Emergency Telecommunications Service (GETS) and Wireless Priority Services (WPS) communication capabilities that allow priority service of land lines and cell phones.

A self-sustaining, mobile command center with seven workstations and a conference area is ready for deployment at all times. It is stocked with basic operating supplies and equipped with wireless communication equipment, laptop computers, plotter to print GIS (Geographic Information Systems) maps, satellite phones, video conferencing equipment, copier/printer/scanner combination, GPS (Global Positioning System), etc. This mobile unit is available for deployment to a specific site or will be used if the DSR is inoperable. The department also purchased essential equipment and supplies needed to handle public information operations off-site.

Geographical Information Systems (GIS) is an integral part of the emergency response process that includes planning, mitigation, response, and recovery. GIS provides support in the DSR and/or Mobile Command Center during an emergency by inputting information about the event and quickly transforming it into an easily viewed map or graph. Information is updated as the situation changes and customized maps are created. GIS can be used to assist with operations such as locating disease outbreaks, tracking contagions, and determining at-risk populations. Using the Internet, the collected data can be made available to emergency managers statewide.



The self-sustaining, mobile command center with seven workstations and a conference area is ready for deployment at all times.

Caruthersville Tornado

On April 2, 2006, a powerful F3 tornado, between $\frac{1}{2}$ to $\frac{3}{4}$ a mile wide, swept through the town of Caruthersville, Missouri. Entire neighborhoods ceased to exist. With street signs gone and only pile after pile of rubble visible, it was very easy to become disoriented, even lost.

The DHSS Mobile Command Center and GIS Team responded to this disaster. The team assisted the environmentalists and local responders with the assessment of public health nuisances on properties that had received damage or were completely destroyed. The team added the path of the tornado into the GIS and compared it with population data to see how many houses and what types of neighborhoods were affected. Since there were few street signs remaining, the team was not always able to get a good address for a site. But by imposing the lo-

cations found by the Global Positioning System (GPS) over aerial and street maps, the DHSS Team was able to show more precise locations. This allowed the local emergency managers the ability to use the maps more effectively to identify lots and track property owners. DHSS environmental inspectors visited every affected location, recorded data about the conditions of the site, and took photographs. Using hand-held GPS units, the team also collected longitude and latitude points for each location. The information collected was entered into a database that was used to create maps and graphs of

the recovery progress. These maps and graphs were used to track areas that had been inspected and identified areas that still needed to be inspected.



By using GIS capabilities, DHSS environmental inspectors were able to track areas that had been inspected and identify areas that still needed to be inspected.

Missouri Telehealth Network

The Missouri Telehealth Network (MTN) digitally links Missouri hospitals, community health centers, public health agencies, and the CDC together via an interactive videoconferencing network. This network will support the delivery of disaster preparedness communications and educational programming, as well as provide a mechanism to remotely provide clinical services during disasters. DHSS, in collaboration with the University of Missouri, has provided equipment and maintenance fees for this system to 24 hospitals throughout the state.



The Telehealth Network links hospitals, health centers, public health agencies and CDC together via an interactive videoconferencing system.

A two-day training is conducted for telehealth program participants at the Missouri Telehealth Resource Center in Columbia. This program gives participants the opportunity to learn real world operations and administrative and technical issues related to the telehealth network. DHSS holds monthly test calls with each participating hospital to assure proper functioning of their systems in the event of an emergency.

Medical Consultant

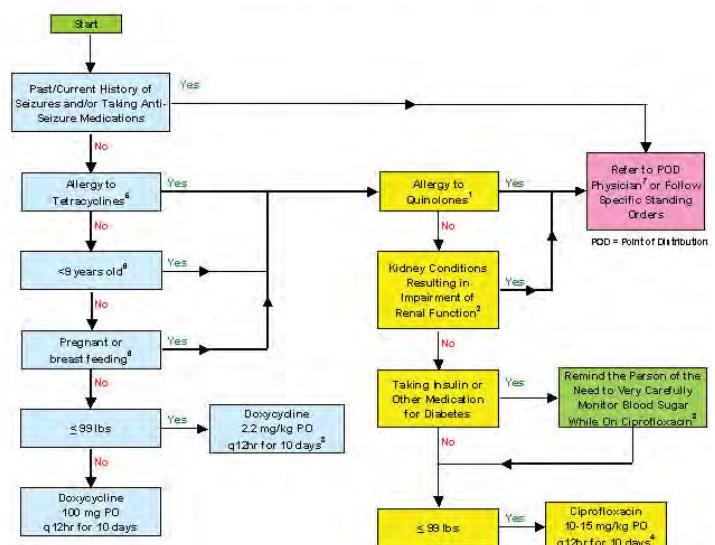
DHSS employs a full-time physician who provides medical consultation to the Center for Emergency Response and Terrorism, as well as to other DHSS staff who are involved in emergency response planning and preparedness. This individual is also available to provide information and education on emergency response and terrorism issues to local public health agency personnel and medical professionals.

The CERT medical consultant works closely with the DHSS' Strategic National Stockpile (SNS) program. Together with other physicians and pharmacists, the medical consultant has helped develop protocols, health assessment forms, and patient information materials to be used if mass antibiotic prophylaxis and utilizing drugs from the SNS becomes necessary following a bioterrorism attack or public health emergency.

The medical consultant has primary responsibility for maintaining DHSS' Emergency Response

Anthrax Post-Exposure Prophylaxis Dispensing Algorithm

Primary Drug: **Doxycycline**



The medical consultant develops protocols, health assessment forms, and patient information materials to be used if mass antibiotic prophylaxis is necessary.

Department of Health and Senior Services
Emergency Response and Terrorism
Report Suspected Biological, Chemical or Radiological Terrorism Events by Calling 1-800-392-0272 (24 hours a day - 7 days a week)

Site Search Questions? Ask Us. Information For: Medical Professionals General Public Pandemic Influenza Preparedness Committee Subcommittees Businesses Faith-Based & Community Organizations Health Care Facilities and Services Schools State/Local Governments Pandemic Influenza Plans: Missouri Pandemic Influenza Plan - Version 2.0 US Dept of Health and Human Services Plan National Strategy for Pandemic Influenza Implementation Plan

Pandemic Influenza

Information From The Missouri Dept. of Health and Senior Services on Human Pandemic Influenza and Avian Influenza

General Information

- Pandemic Influenza Slide Presentation (9.20.06)
- Missouri Pandemic Planning Summit, February 23, 2006 (2.23.06)
- Action Steps Persons Can Take to Prepare for a Possible Influenza Pandemic (11.08.05)
- Recommendations on Personal Stockpiling of Influenza Antiviral Medications (11.08.05)

Health Alerts, Advisories, Updates, Guidelines (For Medical and Public Health Professionals)

- Health Update - Updated Interim Guidance for Laboratory Testing of Persons with Suspected Infection with Avian Influenza A (H5N1) Virus (6.20.06)
- Health Advisory - New Interim Recommendations for Treatment and Prophylaxis of Influenza (1.17.06)
- Health Advisory - Avian Influenza and the Threat of an Influenza Pandemic (11.15.05)

Recommendations and Other Information

A web site, www.dhss.mo.gov/PandemicInfluenza/ is available for persons involved in pandemic influenza preparedness activities.

Websites:
Pandemic, Avian, and Seasonal Influenza Webpage
Pandemic Influenza: Current Situation
Influenza Pandemic Threat: Current Situation (WHO)
Avian Influenza: Current Situation
Avian Influenza: Current Situation (CDC)
National Avian Influenza Surveillance Information (NBIUSIS)
Seasonal (Non-Pandemic) Influenza: Current Situation
Weekly Influenza Report (DHSS)
Flu Activity (CDC)

and Terrorism and Pandemic Influenza web sites. These web sites provide links to comprehensive information on biological, chemical, and radiological terrorism and pandemic influenza, for medical and public health professionals and the general public. During the grant period, the Emergency Response and Terrorism web site recorded 210,987 total hits; the Pandemic Influenza web site recorded 80,863. In addition, much of the information for medical and public health professionals that is available through these two web sites is also provided on CD-ROM.

The medical consultant is closely involved in the development of Health Alerts, Advisories, and Updates, which

provide physicians, hospitals, and public health professionals with timely information and guidance concerning situations of public health significance, such as infectious disease outbreaks. During the grant period, 22 Health Alerts, Advisories, or Updates were issued.

State Public Health Laboratory

Preparedness in the laboratory can be defined as the ability to rapidly respond with appropriate and accurate testing to any public health emergency including disease outbreaks, natural disasters, new and emerging infections, accidents and acts of terrorism - whether biological, chemical or radiological. Laboratory preparedness depends upon sustaining a trained scientific workforce, maintaining the instrumentation necessary to perform state-of-the-art testing and keeping an adequate amount of reagents and supplies on hand. Because emergency preparedness should include all hazards and because it is assumed that each and every emergency event will be unique, it is imperative that technicians maintain their proficiency in all testing methodologies and that instrumentation is continuously maintained and utilized. Preparedness funding continues to be critical in meeting these goals.

Prior to the anthrax attacks of 2001-2002, public health laboratories in the United States were in decline. The Missouri State Public Health Laboratory (MSPHL), like most public health laboratories, did not have the capability to perform rapid molecular testing for biological threat agents. At that time, the MSPHL had only one technician trained to perform testing for anthrax, using traditional culture methods. This meant that results were generated in days, unlike molecular methods, with results available in hours.

Five years after the anthrax attacks, due to state and federal initiatives to strengthen the public health infrastructure, the MSPHL is much better prepared to respond to outbreaks, acts of terrorism and other public health emergencies. The value of this investment has recently been demonstrated by the effective laboratory response to the E. coli outbreak in bagged spinach, as well as outbreaks of West Nile Virus, SARS, monkeypox, pertussis, and mumps.

In 1999, the CDC created the Laboratory Response Network (LRN) to respond to emerging infectious diseases, public health threats and emergencies and terrorist events. The MSPHL serves as the sole LRN reference laboratory in Missouri and as such performs confirmatory tests for biological and chemical agents. These test results are the basis for threat analysis and intervention by both public health and law enforcement and allow for a more rapid local response without waiting for CDC confirmation.

The MSPHL must maintain the appropriate instrumentation, reagents, and trained staff to perform CDC-validated rapid assays using PCR (polymerase chain reaction) and TRF (time-resolved fluorescence) as well as to sustain a level-two Chemical laboratory to deal with chemical-threat agents. The MSPHL is a member of PulseNet, a national outbreak tracking system operated by the Centers for Disease Control and Prevention. In order to be part of this national public health program it is imperative to main-

The Missouri State Public Health Laboratory provides a wide range of diagnostic, biological, radiological, and chemical testing available 365 days a year to protect the public's health.



A chemist operates a High Pressure Liquid Chromatograph / Tandem Mass Spectrometer at the State Public Health Lab to conduct analysis for various weaponized nerve agents in human urine.

tain the proper instrumentation and trained staff to perform bacterial DNA "fingerprinting" in real-time, utilizing pulsed-field gel electrophoresis (PFGE) methodology. In addition, the MSPHL tests samples from the Biowatch early detection system on a daily basis.

A key goal in CDC's Cooperative Agreement for Public Health Emergency Preparedness is to "decrease the time needed to detect and report chemical, biological, and radiological agents in tissue, food, and environmental samples that cause threats to the public's health." To help meet this goal, the MSPHL maintains an intra-state courier service that provides pick-up of specimens in all Missouri counties with delivery to the State Laboratory on a daily basis. Emergency pick-up is available 24 hours a day, 7 days a week, 365 days a year, if needed. This system is considered by the Association of Public Health Laboratories (APHL) to be the optimal system for timely transport of specimens and samples. With this courier system in place, the laboratory is able to respond more quickly to biological, chemical, or unknown hazard threats as well as to outbreaks of diseases such as pertussis, foodborne illness, and pandemic influenza. In the case of a covert terrorism attack, the specimens delivered daily to the MSPHL may well provide the earliest information on the nature and scope of the attack. Specimens that are slow in transit push back the timing of laboratory testing and delay generation of results; consequently, informed decisions affecting public health will also be delayed. In addition, specimens that are delayed in transit are often unsatisfactory for testing. The daily monitoring of specimen pick-up and delivery serves as an excellent continuous exercise of this essential service.



A chemist loads a human blood sample onto an Automated Headspace Gas Chromatograph / Mass Spectrometer at the State Public Health Lab for the quantification of cyanide.

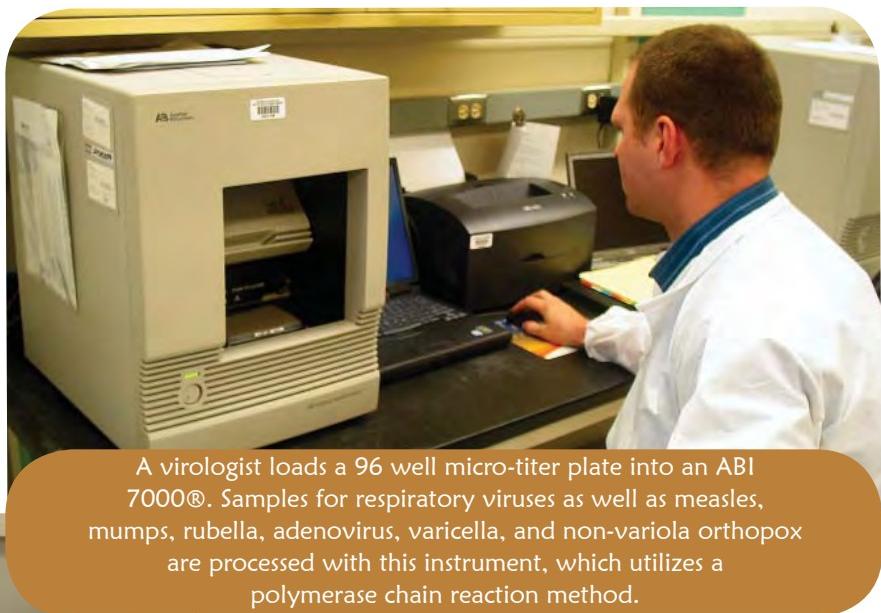
The expansion of the MSPHL's capacity and capability to deal with agents of bioterrorism has translated into an overall augmentation of laboratory capabilities. Rapid detection of an outbreak is crucial to setting an appropriate epidemiologic response in motion, and the MSPHL is now able to detect disease outbreaks more rapidly and to respond quickly to testing needs as new diseases emerge. To maintain technician proficiency and maximize instrumentation value, the CDC recommends that equipment and staff acquired with preparedness funding be integrated into routine laboratory operations whenever possible.

Because of the trained technical staff and instrumentation already in place, the MSPHL was able to immediately assume the role of confirmatory laboratory for positive samples from the U.S. Postal Service's BioDetection Systems (BDS) in place throughout Missouri.

Trained technicians and the instrumentation used to detect chemical agents in human samples can be used for routine biomonitoring for potential environmental contaminants; tests for Venezuelan Equine Encephalitis can be quickly adapted to test for West Nile Virus; rapid assays and equipment used to test for anthrax can also be used to test for pertussis; trained technicians can be used as surge capacity in the event of a pandemic influenza or other disease outbreak.



A microbiologist prepares the MagNA Pure LC® DNA extraction instrument, which is used to isolate nucleic acids from bacteria and environmental samples. The resulting product will be analyzed using a LightCycler® Polymerase Chain Reaction instrument.



A virologist loads a 96 well micro-titer plate into an ABI 7000®. Samples for respiratory viruses as well as measles, mumps, rubella, adenovirus, varicella, and non-variola orthopox are processed with this instrument, which utilizes a polymerase chain reaction method.

Division of Community and Public Health

The Division of Community and Public Health (DCPH) has statewide responsibilities, in cooperation with local public health partners, to prepare for and respond to public health threats to food and private water supplies, and from infectious diseases including zoonotic threats and radiological or chemical events whether natural, deliberate, or accidental. DCPH has mission-critical functions in emergency response in the areas of surveillance, disease investigation, and environmental public health. DCPH collaborates with and supports the departmental functions of emergency response managed through the Center for Emergency Response and Terrorism. DCPH, and public health preparedness in Missouri, has benefited from the additional funding through the Public Health Emergency Preparedness grants from CDC to enhance the capacity and capability of the public health preparedness critical-mission areas for which DCPH has responsibility.

In particular, DCPH has enhanced capacity for disease investigation and interventions by funding a number of epidemiologists at the state and local levels.

Critical functions provided through the Division of Community and Public Health, such as surveillance, disease investigation, and environmental public health are vital to emergency response efforts.

Rapid Response Teams of state and local disease control specialists are located around the state and have responded to a number of bioterrorist threats, including "white powder" (anthrax) incidents, ricin poisonings threats, food tampering incidents, smallpox scares, a BioWatch incident, Avian influenza hoaxes and other similar threats and incidents. In addition, these staff have proved invaluable in providing epidemiological capacity and expertise during a number of high-profile events, including the response to hurricanes Katrina and Rita, presidential debates, the World Series, the Monkeypox response and the threat of other emerging exotic infectious and zoonotic diseases. Perhaps even more importantly these epidemiologists maintain their skills and enhance the broader public health system that daily provides protection and disease control interventions for all Missourians. They have successfully responded to a large-scale norovirus outbreak on a Mississippi riverboat, a multi-county shigellosis outbreak in the Kansas City area, a cryptosporidiosis (with nearly 70 confirmed cases) outbreak in Madison County, and the list goes on with daily investigations and interventions. These daily activities are essential as any outbreak or even a single case of disease may signal the beginning of a large-scale incident or terrorist attack.

To further detect and analyze events of public health importance and maintain good information flow during the event in order to guide public health interventions and the actions of the epidemiologists, DHSS has also enhanced surveillance programs through the Public Health Emergency Preparedness grants. The Public Health Event Detection and Assessment Unit (PHEDA) in DCPH manages the BioTerrorism Surveillance (BTS) and ESSENCE surveillance systems to provide for early event detection.

In Missouri, hospitals that meet certain criteria are required to send data for each emergency department (ED) visit electronically to DHSS for the purpose of using those data to look for trends in broad disease categories (e.g., respiratory, gastrointestinal), also called syndromes.

ESSENCE is an acronym for Electronic Surveillance System for the Early Notification of Community-based Epidemics. The Johns Hopkins University Applied Physics Lab developed ESSENCE in conjunction with the Department of Defense.

The ESSENCE system works by placing chief complaints from each ED visit into one or more syndromic groups. The system then determines whether the number of visits in that syndromic category was higher than expected for that hospital, county, or zip code. This allows public health officials at the state and local level to become aware of a potential outbreak, bioterrorist attack, or other adverse health event much earlier than would be possible through traditional surveillance methods.

The ESSENCE system can also be used to increase situational awareness by augmenting information about a known health event (e.g., an outbreak, a natural disaster, a chemical accident) and its consequences. Situational awareness information can be used to assess the extent, impact, or location of an event, and to help public health partners target resources or redirect response efforts.

Whether syndromic surveillance is used for early event detection or situational awareness, its purpose is the same - to provide information to our partners at the state and local level that helps them to prevent, contain, or mitigate the effects of a public health event.

Hospital data are reviewed daily by PHEDA. Information needing further follow-up is forwarded to Communicable Disease Control and Prevention personnel.

Through BTS, sentinel reporters (such as schools and clinics), provide daily counts of ill persons to DHSS based on syndromes. These counts are compiled daily and analyzed for trends by the PHEDA unit, much as with ESSENCE, to provide alerts to state and local disease control staff.

Public Health Liaison Closely Links Hospitals and Health Department

Several St. Louis area hospitals are benefiting from a grant that provides funding for the Public Health Liaison Pilot Project, whereby a public health nurse is physically located at St. Louis area hospitals.

Participating St. Louis County hospitals include St. Anthony's Medical Center and St. Luke's, DePaul, St. Mary's, Christian Northeast, Missouri Baptist, St. Joseph's-Kirkwood and BJC-West Hospitals. Public health liaisons also are stationed at BJC and St. Louis Children's Hospitals in the city, St. Joseph's in St. Charles, and Barnes-Jewish in St. Peters.

The day-to-day activities of the public health liaison include interacting with the Intensive Care (IC) Department regarding in-house diseases; with the Emergency Department (ED) staff to review admissions and track reportable diseases; with the Lab to review reportable conditions from laboratory testing; attending meetings of the hospital's IC, ED, Emergency Preparedness, Safety and Microbiology departments; entering case reports into the state disease registries; fielding phone calls from other public health agencies; and providing information/education on public health, as requested by hospital staff.

The pilot program is funded by a one-year renewable grant allocated by the Health Resources and Services Administration (HRSA).

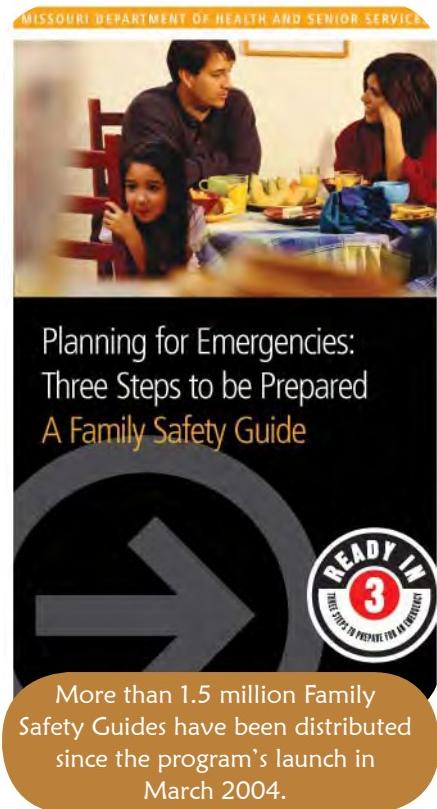


An employee of the St. Louis County Department of Health, is working as public health liaison at St. Anthony's Medical Center.

In the area of food security, DCPH has been able to hire a dedicated staff person and has undertaken a number of initiatives, in conjunction with federal, state, and local partners, to better protect Missouri's food supply. State environmental staff have held trainings across Missouri for all local health environmental public health specialists educating them about the threat (and the impact from such attack) to the food supply from terrorists, both domestic and foreign. Staff from the Office of Emergency Coordination in DCPH conducted five Food-borne Terrorist Event tabletop exercises in all the major metropolitan areas of the state (St. Louis, Kansas City, Springfield, Columbia, Cape Girardeau) with several hundred participants from public health and safety partners to enhance awareness and response capabilities to a food borne incident. DCPH developed a "food tampering report form," which has been used during a number of incidents, to increase the flow of communication and response during such events. DHSS, in conjunction with the Missouri Department of Agriculture (MDA), the State Emergency Management Agency, the U.S. Drug Administration, Food and Drug Administration (FDA), and various other state and local partners developed a Missouri Food Emergency Response Plan. DHSS engaged with the FDA to conduct a specialized food sampling program at major Missouri food plants to determine vulnerabilities and risks, and is currently at work to implement an ongoing sampling program. DHSS and MDA have conducted a vulnerability assessment of Missouri's food industry, and DHSS is currently working with FDA to further assess vulnerabilities conducting CARVER assessments at food processing facilities.

Ready in 3

The Ready in 3 emergency preparedness program was developed to educate all Missourians about planning for emergencies and to motivate them to act on that knowledge by preparing their households, businesses, and families.



State and local public health agencies are working with other state agencies, faith-based organizations, schools, emergency responders, employers, seniors and special needs populations, community groups, and the Missouri General Assembly to inform individuals about steps they can take to prepare for an emergency.

A family safety guide, family plan, brochures, fact sheets, videos, posters, presentation materials, and newsletter articles are available for residents, community groups, and businesses. Resources and tools have been created in multiple languages and for specific targeted audiences such as homily messages, weekly bulletin text, and youth group activities for faith-based organizations; lesson plans, bookmarks, activity sheets, and videos for child care facilities and schools; planning templates and videos for adult

care facilities; and videos for Missourians who use American Sign Language. All materials are free of charge and are available on the Ready in 3 web site at www.dhss.mo.gov/Ready_in_3.

In addition, various promotional campaigns have been created centered around the Ready in 3 preparedness message such as print advertisements published in English and Spanish, radio and television public service announcements, and movie theater advertisements.

During this grant period, the CERT gave Ready in 3 presentations to over 75 organizations across the state.

Ready in 3 aims to educate all Missourians on steps they can take to prepare for emergencies of all kinds.

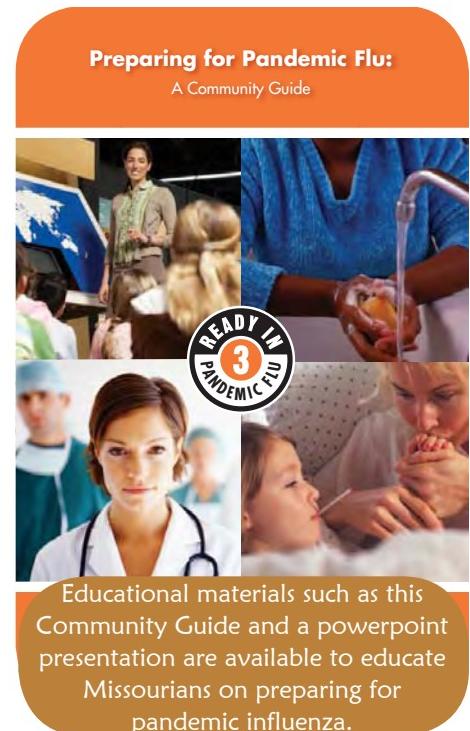
The Ready in 3 program received awards presented by the National Public Health Information Coalition for its web site and video for Missourians who use American Sign Language.

Pandemic Influenza

Of major concern to DHSS during this time period was the continuing spread of the H5N1 Avian influenza virus and the possibility of further mutation of this novel virus into a form that can be spread easily person-to-person. Much work, therefore, took place in preparation for avian and/or pandemic influenza, with a complete upgrade of the state Pandemic Influenza Plan and the formation of a Pandemic Steering Committee and associated subcommittees under the auspices of the Governor's Homeland Security Council.

Workgroups meet on a routine basis and are working to make the state plan more comprehensive. The committees and a snapshot of their activities include:

- Avian Influenza Outbreaks in Animals with Zoonotic Implications
 - Surveillance, Prevention and Response Plan, now posted on DHSS' web site
 - Response Call Decision Tree for reported sick/dead birds
- Continuity of Business, Government and Life
 - Business Continuity Guide and outreach plan
 - Prioritization of critical infrastructure and recommendations to protect the business, its employees and the community.
- Health Care Systems Readiness
 - Assessment of challenges with liability, supplies, communication, staffing and security
 - Recommendations and planning guidance for surge capacity
- Laboratory Preparedness
 - Surge capacity plans; review of procedures
 - Addition of sentinel sites
- Local Public Health Agency Readiness
 - Liaison with committees and local public health agencies to address needs
- Mental Health
 - Statewide listing of systems, capacities, personnel and resources
 - Strategies to provide mental health support to public and healthcare providers
- Mortuary Affairs
 - Assessment of current capacity and planning for mass fatalities
- Prevention and Community Preparedness
 - Resource Guide
- Public Communications
 - Ready in 3 booklet, Preparing for Pandemic Flu: A Community Guide
 - Public service announcements and key messages
- School Safety
 - Web-based school planning tool
- Special Health Care Needs
 - Train-the-trainer curriculum for providers
 - Statewide plan, by each pandemic phase, to address care issues
- Surveillance, Investigation and Data / Information Sharing
 - Review of current surveillance reporting systems
 - Electronic lab reports
- Vaccine and Antiviral Preparations
 - Operational level plans for receipt, storage, distribution of vaccine / antivirals
- Isolation and Quarantine
 - Evaluation of current regulations / executive orders



Pandemic Influenza Planning Summit

Missouri's Pandemic Influenza Planning Summit on February 23, 2006, brought together approximately 400 federal, state and local leaders to address pandemic readiness planning and give a broad range of organizations an opportunity to participate in the process. Missouri is carrying out its commitments outlined in the planning resolution signed by the U.S. Department of Health and Human Services (HHS) Deputy Secretary Alex Azar and Governor Matt Blunt at the summit. These include ensuring that Missouri's operational plan for pandemic influenza response is an integral element of the overall state and local emergency response plan, establishing a Pandemic Preparedness Coordinating Committee representing all relevant stakeholders, and exercising its preparedness plan within six months of the summit. Missouri tested its preparedness plan in June 2006, in coordination with the state's full-scale Strategic National Stockpile exercise in Springfield.



Governor Matt Blunt and Deputy Secretary of Health and Human Services Alex M. Azar II signed a resolution at Missouri's Pandemic Planning Summit on February 23, 2006, committing the state and federal government to planning efforts.

Department of Mental Health - Office of Disaster Readiness

DHSS is collaborating with the Missouri Department of Mental Health's Office of Disaster Readiness to enhance the networking capacity and training of health care professionals and others to recognize, treat, and coordinate care related to the behavioral health consequences of bioterrorism and other public health emergencies. In addition to the trainings, employees participate in exercises and drills that integrate behavioral health components into their hospital preparedness plan and other response plans.

The Office of Disaster Readiness coordinates with federal, state, and voluntary organizations to ensure a coordinated behavioral health response to all-hazards, and to ensure access to the most up-to-date training and research on the behavioral health response to disasters.

The Office of Disaster Readiness develops and administers the Federal Emergency Management Agency Crisis Counseling Program grant when there is a federal declaration in Missouri. The Office of Disaster Readiness maintains a seat at the State Emergency Management Agency's (SEMA) Operations Center and the DHSS Department Situation Room to coordinate the behavioral health response in a disaster or terrorism event.

During this grant period, more than 750 health care workers, first responders, emergency management officials, school personnel, mental health professionals, faith-based leaders, and volunteers received training on behavioral health response in a disaster.

The Office of Disaster Readiness works with DHSS and SEMA on planning efforts such as special needs populations and pandemic influenza. Staff actively participate in the DHSS pandemic influenza planning subcommittees of mental health, special health care needs, and mortuary affairs.

Accurate information for the public in times of disaster is critical. What is said and how it is conveyed to key audiences by public officials, spokespersons, and elected leaders can make a tremendous difference in individual and community recovery. Working with DHSS, the Office of Disaster Readiness has developed Disaster Communications Guidebooks to provide Missourians with accurate information during disasters.



Information Technology Services Division

The Information Technology Services Division (ITSD) provides application development support for the maintenance and enhancements of new and existing emergency response software applications for use at DHSS. Some of these applications include the Missouri Health Strategic Architectures and Information Cooperative (MOHSAIC), Missouri Health Surveillance Information System (MOHSIS), and the Bioterrorism Surveillance System (BTS).

MOHSAIC is a web-based application that was designed to track the Strategic National Stockpile (SNS) inventory. DHSS, in collaboration with local public health agencies and participating hospitals, uses the application to track SNS inventory through the receipt of materiel from the CDC; initiating, editing and approving orders; transferring to LPHAs and hospital dispensing sites; and the return of unused inventory to the DHSS.

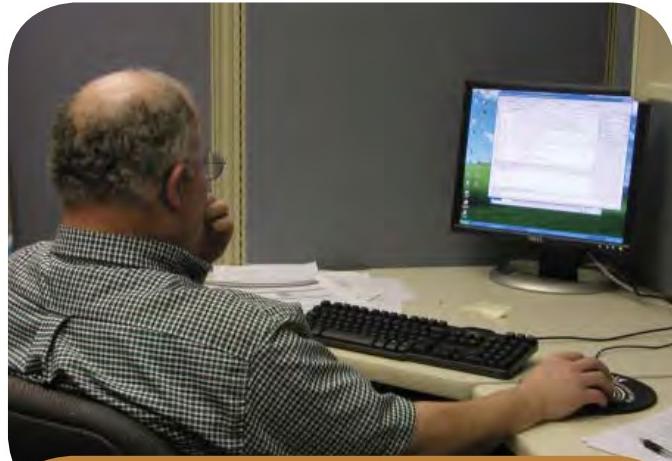
During the past year MOHSAIC has been redesigned to make it easier and more intuitive for use in the field by local public health agencies and hospitals. This includes streamlining the application by removing unneeded screens. An on-line instruction manual was added to give the latest information and instructions on using the application. Many edit checks were added for more accurate data collection and tracking. A "Units in Units" feature was also added, which provided better accounting and tracking of inventory from receipt of the SNS materiel through the return of unused inventory to the DHSS. The changes allow faster and easier data entry when time may be of the essence.

A reliable information network and information technology system is essential to DHSS' ability to conduct emergency preparedness activities.

MOHSIS is a transactional application used by DHSS and LPHA staff. It provides a centralized and integrated database for the entry, update, and retrieval of surveillance information about reportable conditions of interest to public health. MOHSIS provides an efficient system for disease investigation staff to track the progress of cases. Reports are available to DHSS and LPHA staff and are submitted to CDC.

In the past year, enhancements were made to the program to increase the speed of the application to make it easier and more efficient. In the coming year, the program will be available as a web-based application that can be accessed anywhere via the Internet.

The Bioterrorism Surveillance System is a web-based application used for data entry of daily, aggregate



Application development staff work continually to provide enhancements to the emergency preparedness applications.

network and information technology, which is essential to DHSS' ability to conduct emergency preparedness activities.

The Information Technology Services Division is preparing DHSS for PHIN Preparedness Certification. The Public Health Information Network (PHIN) is CDC's vision for advancing fully capable and interoperable information systems in the many organizations that participate in public health. ITSD staff participates on the DHSS PHIN preparedness certification committee and is working to complete the functional self-assessments as the first step towards certification. ITSD plans to complete a gap analysis to determine where improvement is needed so priorities can be set accordingly. ITSD staff are also participating on multiple national workgroups and committees to review PHIN requirements and modify the standards to make them clearer, more concise, and simpler to implement and use.

A screenshot of a Windows application window titled "Case Report Location Entry". The interface includes various input fields for case details like "Case ID", "Report Date", "Report Month", "Report Year", "Location", "Case Status", "Report Type", and "Report Source". There are also sections for "Patient Demographics", "Medical History", and "Treatment". A large text area for "Case Report Description" is present at the bottom.

This represents an entry screen of the Missouri Health Surveillance Information System application.

syndromic data (syndromic data would precede diagnosis and may signal a sufficient probability of a case or an outbreak to warrant further public health response) from sites such as hospitals and schools. These disease-reporting systems are used to quickly identify an unusual disease or an unusual number of cases of a disease.

Plans are in place to enhance the reporting system and allow more staff access to the current reports. Several entry screen enhancements have also been proposed to make the system faster and more efficient.

In addition to the software application development and support, ITSD works with CERT to ensure that DHSS has a reliable information

A screenshot of a Windows application window titled "Bioterrorism Surveillance System". The interface shows a list of items under "Bioterrorism Surveillances" and "Bioterrorism Events". Below this, there are sections for "Event Details", "Event Summary", "Event Log", and "Event History". A "Search" button is located at the bottom right.

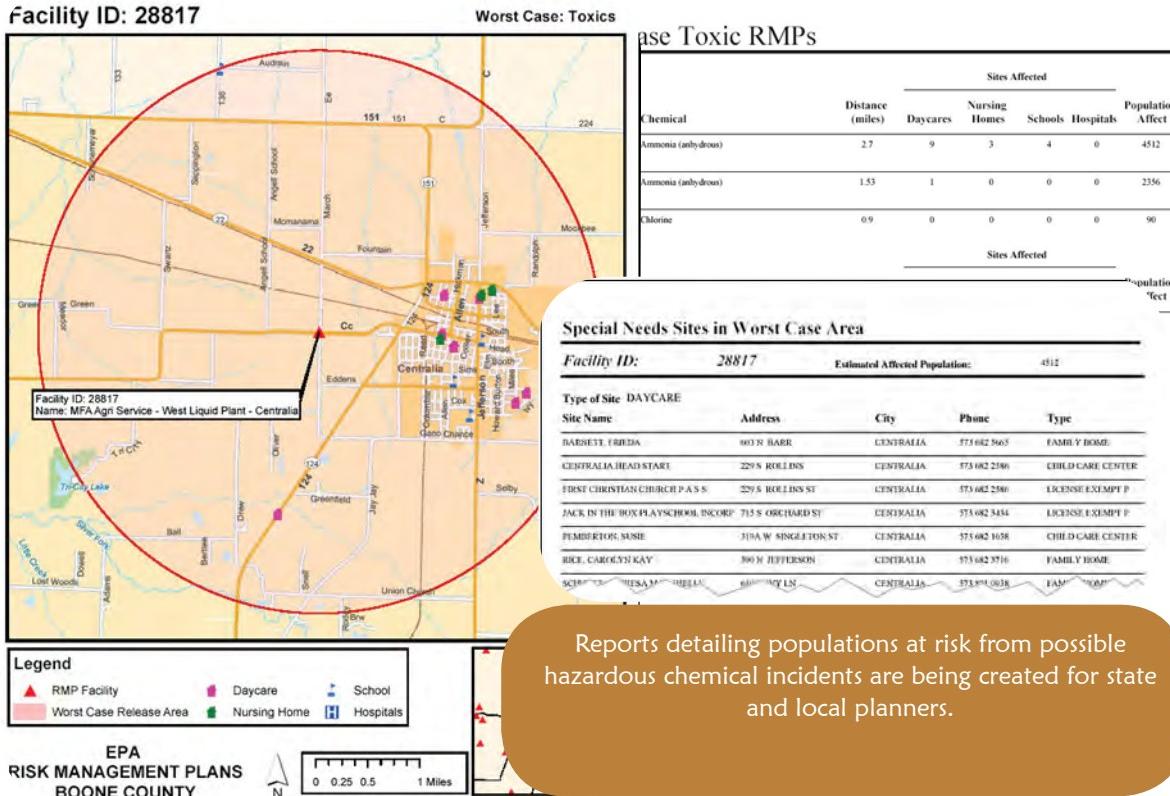
This represents an entry screen of the Bioterrorism Surveillance System application.



Thirty-three local public health agencies currently participate in the Local Emergency and Environmental Public Health Initiative.

large chemical release could impact. GIS is used to identify day cares, nursing homes, hospitals, and schools that fall in these areas.

This collaborative effort is providing to local and state health agencies, as well as emergency planners, the tools necessary to prepare response plans that adequately handle the intricacies involved with sensitive populations.



The Geographic Information Systems (GIS) unit within ITSD continues to provide support for emergency preparedness and response. Locating outbreaks, tracking contagions, determining at-risk populations, and assisting with logistics are just a few examples of how GIS has helped emergency response efforts across the state.

The GIS unit partnered with local public health agencies to improve local geospatial capabilities for emergency response and public health surveillance. GIS software and GPS units have been provided to 33 local public health agencies through the Local Emergency and Environmental Public Health Initiative. ITSD staff conducted field data collection training, as well as introductory and advanced GIS courses.

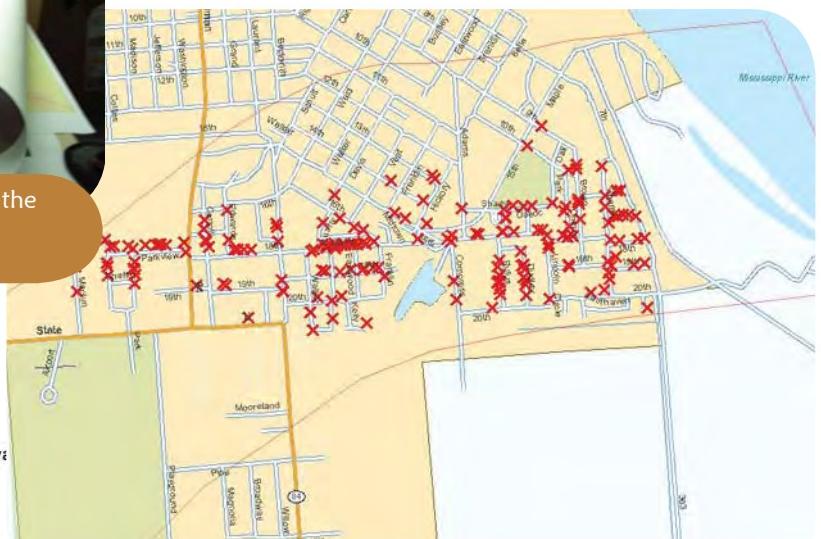
GIS staff is also collaborating with DHSS' Office of Emergency Coordination to map chemical facilities that house large amounts of chemicals, and identify the areas that a

The GIS Unit continues to develop new methods for enhancing response and improving efficiency during emergency events. In April 2006, the GIS Unit was instrumental in assisting local responders in assessing the destruction of the Caruthersville tornado. GIS improved event coordination and helped speed up the recovery efforts.

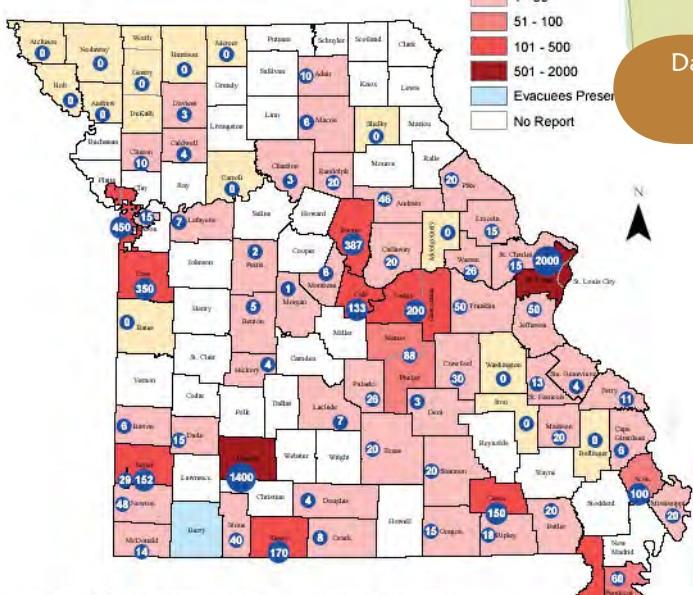
During the aftermath of Hurricane Katrina, GIS staff created maps that showed the location of evacuees in the state. In another event, GIS staff responded quickly to produce maps for a potential dam failure. They helped enhance decision-making capabilities during the crisis by identifying threatened facilities, populations, and infrastructure. Staff have also worked closely with the Radiological Response Team to incorporate GIS into their nuclear event response planning. The GIS Unit continues to map disease outbreaks as well.



GIS staff work in Caruthersville, Missouri to track the progress of field response teams.



Data collected by field response teams was used to create a map showing tornado destruction in Caruthersville, Missouri.



This map shows the distribution of evacuees following Hurricane Katrina.

Annual Public Health Preparedness Conference

Training state and local public health employees and health care staff is vital to being prepared and has been a priority for DHSS. The department hosts an annual statewide conference with 375 participants to bring together emergency response partners from across the state. These emergency response partners include representatives of local public health agencies, laboratories, other state agencies, hospitals, emergency responders, volunteer organizations, law enforcement, school administrators, health care organizations, universities, and other states' health departments. Conference sessions are designed to incorporate bioterrorism preparedness into the daily business of public health and broaden and expand the environmental and epidemiological response in the case of a public health emergency.



DHSS' CERT hosts an annual statewide conference that brings together over 375 emergency response partners from across the state.

Public Health Preparedness and Response UPDATE



State and local public health agencies and hospitals conduct Strategic National Stockpile exercise in Southwest Missouri

The Missouri Department of Health and Senior Services conducted a joint emergency response Strategic National Stockpile (SNS) exercise recently in Springfield in order to demonstrate and improve the region's ability to save lives after a bioterrorist attack. In the event of a bioterrorist attack or large-scale crisis, state and local public health agencies must be prepared to quickly distribute mass quantities of lifesaving pharmaceuticals, antidotes, vaccines and other medical supplies to more than 800,000 in the Southwest Missouri's Region D area. The Missouri state health department, four local public health agencies in the Region D area, and three hospitals joined forces to test their plans for mass distribution of these medications to the public.

The federal government established the Strategic National Stockpile (SNS) program to deliver large and continuous quantities of medical items to the site of a national emergency within 12 hours. During an emergency, state, local and private stocks of medical materiel could be depleted quickly. Therefore, the SNS Program stands ready for immediate deployment to any U.S. location in the event of a national emergency. Each 12-hour Push Package contains an assortment of medical products to help in a variety of possible biological, chemical or nuclear terrorism events. If additional pharmaceuticals and medical supplies are needed, the Managed Inventory (MI) supplies will be shipped to arrive within 24 to 36 hours. The Managed Inventory can also be tailored to provide specific pharmaceuticals, supplies or products and serve as the first option for immediate response.

"This exercise is one example of the work we are doing to ensure a safer, more secure America," said Julia M. Eckstein, director of the Missouri Department of Health and Senior Services. "All of us have been working hard and have plans in place to ensure that during an emergency we are ready to receive and distribute the Strategic National Stockpile and dispense the medications to residents quickly."

The Missouri state health department not only tested its ability to receive, repackage and distribute the Strategic National Stockpile 12-hour Push Package and the Managed Inventory shipment, but local public health agencies practiced how to quickly dispense these medications to the public. Participants served as role players at each of the dispensing sites. Three area hospitals also participated and provided mock medications to their first responder staff.

"Missouri has already taken significant steps to prepare for public health emergencies, including improved disease investigation, laboratory testing and public health and medical care response capabilities," Eckstein said.

DHSS' CERT produces a newsletter that keeps state and local leaders informed of emergency response activities.

The Public Health Preparedness and Response UPDATE highlights the efforts of Missouri's preparedness efforts across the state and is disseminated among public health partners at the local, regional, state, and federal levels.

Health Resources and Services Administration National Bioterrorism Hospital Preparedness Program

To develop and enhance hospital and other health care entities' capacity and capability to respond to terrorism, natural disasters and other public health emergencies, DHSS' National Bioterrorism Hospital Preparedness Program (NBHPP) collaborates with DHSS' Division of Community and Public Health, Division of Regulation and Licensure, Missouri State Public Health Laboratory and several key organizations and associations within Missouri.

Competency-based education has been provided to hospitals and other health care entities by DHSS and through contracts with the Missouri Hospital Association (MHA), St. Louis Area Regional Response System (STARRS), Mid-America Regional Council (MARC), and the Department of Mental Health (DMH). The competency-based educational programs include:

- National Incident Management System Train-the-Trainer;
- Basic and Advanced Disaster Life Support;
- Train-the-Trainer Equipment Instruction; and
- Psychological First Aid Training.

Through contracts with Missouri Primary Care Association (MPCA) and Missouri Alliance for Home Care (MAHC), the NBHPP funds have provided staff from the Federally Qualified Health Centers and Home Health Industries the opportunity to participate in planning efforts, educational opportunities, and exercises. Federally Qualified Health Centers and Home Health Industries are equipped to offer assistance to local public health agencies and hospitals. Their offices may be used as a triage site or an alternative care center, based on the regional plans.

To increase surge capacity, DHSS, in collaboration with MHA, MARC, and STARRS have provided Missouri hospitals significant funding for equipment and supplies. Equipment and supplies that hospitals have received include emergency blankets, towels, hospital emergency triage response kits, redundant communication equipment, handheld radiation detection meters, Class C personal protective equipment, military-style stretchers and stands with decontamination capability, and other decontamination equipment.

Trailers containing critical supplies like cots, blankets, and comfort kits can be moved to any disaster in Missouri.



1 of 19 mass casualty / trauma trailers containing equipment and trauma supplies located at hospitals across the state.

Mobile emergency response trailers have been purchased, equipped and located throughout the state. These trailers are equipped with deployable tools to assist in developing surge capacity.



Mobile emergency response trailers equipped with deployable tools to assist in enhancing surge capacity have been purchased, equipped, and located throughout Missouri.

The regional placement of the trailers provides reduced response time in deployment to a mass casualty incident or disaster. Hospitals hosting a trailer have agreed to maintain the trailers for use within their communities or in response to regional or state emergencies.



Trailers containing supplies, including cots, blankets, and comfort kits were deployed to St. Louis during the Hurricane Katrina and St. Louis Power Outage events.

The MO-1 Disaster Medical Assistant Team (MO-1 DMAT) is a local, regional, state, and federal resource. Team members include professional and paraprofessional medical personnel (supported by a cadre of logistical and administrative staff) designed to provide emergency medical care during a disaster or other event. Three regional response teams are located in strategic locations around the state: St. Louis, Kansas City, and Springfield/Branson.



MO-1 DMAT assets, including shelters, were deployed to St. Louis during the Hurricane Katrina and St. Louis Power Outage events.

Volunteer Registry for Health Professionals

As a result of a partnership between DHSS and the Missouri Division of Professional Registration, medical professionals have the opportunity to enroll as disaster volunteers. Individuals register through a web-based system, which collects and manages data on all licensed health care professionals willing to assist with the increased influx of patients during an emergency or mass casualty event. To date, 2,359 registered nurses and 327 licensed practical nurses have enrolled.

Specific information such as address, region of residence, profession, expertise, availability, and the status of credentials are collected from the health professional as part of the registration process for the Volunteer Health Professionals roster. Collecting this information will increase the state's ability to rapidly contact and deploy health professionals to a particular location during an emergency.

Volunteers may be deployed to Strategic National Stockpile dispensing sites, treatment centers, and other locations where patients are being treated.

This program is voluntary and licensed health care professionals registering as volunteers can elect not to participate in an event due to personal circumstances.

Center for Local Public Health Services

The Center for Local Public Health Services (CLPHS) convenes local public health agencies, state partners, and other stakeholders to address emergency preparedness issues related to the public health volunteer system and public health workforce development in order to protect the health of individuals impacted by disasters.

Recent national and local events have underscored the need for volunteers to assist public health with staffing needs. Public health volunteers were needed in Southern Missouri to assist with medical triage of incoming evacuees displaced by Hurricane Katrina in summer 2005. During the 2006 summer heat crisis and power outage, public health volunteers were needed at St. Louis cooling sites and area hospitals to expand medical capacity. Public health volunteers were also used in 2005 at the Springfield flu vaccination clinics during the flu vaccine shortage to help the public negotiate clinic lines and complete required patient forms. Using public health volunteers allowed the local public health agency to vaccinate 2,000 people in four hours.

The Center for Local Public Health Services acts as a liaison to local public health agencies for communication and public health workforce development.

Following the 2005 hurricanes, DHSS created a Public Health Volunteer Advisory Committee comprised of state, local, and community partners. DHSS worked closely with the three contracted volunteer training coordinators, located in various regions of the state, the Public Health Volunteer Advisory Committee, and stakeholders to develop the Public Health Volunteer Management Recommendations – Utilizing Volunteers in a Public Health Setting. The recommendations on policy, documentation, and training of public health volunteers can be used by LPHAs and seamlessly incorporated into existing emergency plans. Adoption of the public health volunteer management recommendations by LPHAs will allow for categorizing and consistency of public health volunteers. An annual public health volunteer symposium on utilization of volunteers in a public health setting is held

in August. In 2006, 139 participants attended the symposium to discuss usage of spontaneous volunteers, keeping volunteers mentally healthy during crisis response, trends in volunteering, and best practices.



A regional volunteer coordinator discusses public health volunteer issues during the August 2006 Public Health Volunteer Management Symposium.

advance their public health skills and disaster preparedness. The system is web-based to allow individuals to learn at their own pace. This system eliminates the cost of time away from the worksite and travel expenses.

To encourage optimal usage of the LMS as a training tool for the public health system, the CLPHS held 21 training courses throughout the state in partnership with the Heartland Center. As a result, 142 local public health agency staff from 89 counties have been trained. Following training, 106 of the local public health agencies have registered employees in the LMS, of which nearly 54 percent have completed an individual employee assessment that develops tailored training plans. A total of 1,184 employees have enrolled in one or more courses and 602 employees have completed training courses.

Six regional public health system meetings served as a venue twice over the past year for additional training of 114 LPHA administrators and staff. Topics covered included the emergency medical system as a public health resource, the Ready in 3 emergency preparedness program, and collaboration between hospitals and public health. Information related to bioterrorism topics is also routinely communicated to LPHAs, state agencies including DHSS staff, and community partners via Friday Facts, a weekly e-newsletter.



Participants at the 2006 Public Health Volunteer Management Symposium learn how volunteers will be utilized to assist public health during a disaster.

Over the past year, the DHSS' Speakers' Bureau received 83 requests for presentations.

To increase community members' awareness, a Speakers' Bureau on Emergency Response was developed to offer professionals and the general public a clearinghouse of qualified speakers able to address a wide range of emergency preparedness and response topics. There are currently 30 speakers in the Speakers' Bureau.

The Public Health Nursing Liaison within CLPHS coordinates educational programs to prepare nurses within DHSS and LPHAs to respond to emergency situations. An annual public health nursing workshop is one mechanism to deliver needed training. A total of 96 participants attended the May 2006 workshop.

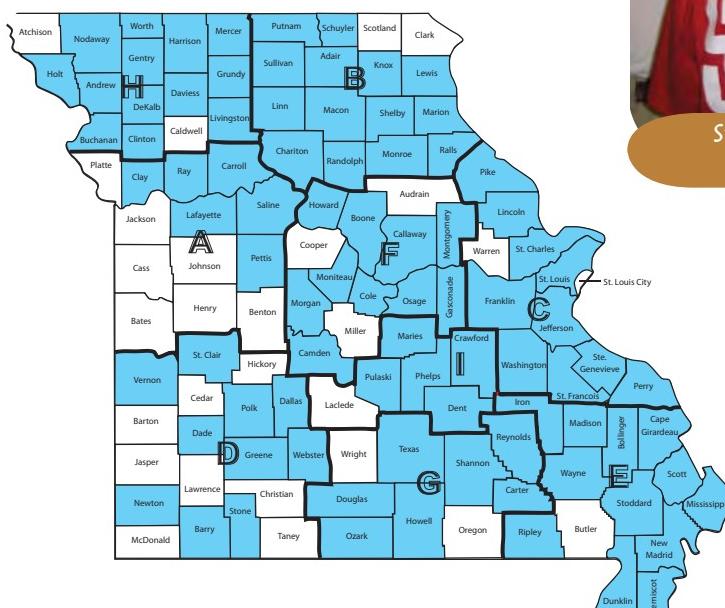
DHSS'Community Development Services (CDS) is now housed within the Center for Local Public Health Services. CDS staff work to connect community coalitions to emergency preparedness activities both at the state and the local levels. These coalitions are valuable grass-roots organizations that strive to improve and protect the health of their communities. One way CDS accomplishes this mission is by actively participating in pandemic influenza planning to develop strategies to bring communities together and prepare how they will respond to protect their citizens during a pandemic.



Public health nurses discuss emerging issues with a panel of experts at the May 2006 Public Health Nursing Workshop.



Staff check in volunteers during the June 2006 Strategic National Stockpile exercise.



Eighty-nine counties were trained on the Learning Management System during 2006.

Strategic National Stockpile

The Strategic National Stockpile (SNS) is a national repository of critical medical supplies designed to supplement and resupply state and local public health agencies in the event of a national emergency anywhere and at anytime within the United States or its territories. The goal of the SNS program is to provide the rapid delivery of SNS lifesaving pharmaceuticals to any location within 12 hours or less from the federal decision to deploy. The SNS program is managed by the CDC and is carried out in conjunction with state and local communities, which have responsibility for developing their own plans for the receipt and distribution of SNS supplies.

DHSS' Center for Emergency Response and Terrorism is responsible for planning, training, and managing the SNS supplies at the Receiving, Staging and Storage (RSS) sites. DHSS employees are trained to quickly and efficiently receive, separate and distribute the supplies to local public health agencies and hospitals. More than 100 DHSS employees have received hands-on training and are prepared to operate the RSS site around-the-clock, if necessary. During the past three years, Missouri held major full-scale exercises to test each RSS site in Kansas City, St. Louis, and Springfield, as well as state and local plans for the massive distribution of SNS materiel. Local public health agencies are responsible for distributing and dispensing the medications to their residents once they receive the materiel from the RSS site.

Missouri was the first state to create its own SNS containers, which greatly increases the level of hands-on training provided to staff. Because of DHSS' work to create containers and Managed Inventory, DHSS, local public health agencies, and hospitals are not dependent on the federal government for simulated supplies for exercises and training. Normally the federal government can provide such exercise support to states only about once every five years. Because DHSS has created its own supplies and SNS equipment, the state can train RSS team members and hold exercises every year.

DHSS provides guidance for the creation of local and regional response plans as well as training for the Missouri Health Strategic Architectures and Information (MOHSAIC) system. MOHSAIC is a secure web-based system that allows LPHAs and hospitals to order SNS medications rapidly. The MOHSAIC system also allows the SNS Program Manager, based in CERT, as well as LPHAs and hospitals to track status of their orders throughout the entire process.

The goal of the SNS program is to provide the rapid delivery of lifesaving medications to any community in Missouri within 12 hours.



The orange containers in the foreground are simulated containers built by DHSS and the Department of Corrections, with the Managed Inventory pallets in the back.

SNS operations also require collaboration and coordination of many state agencies. Through the SNS planning process, DHSS has strengthened partnerships with the Missouri State Highway Patrol, Missouri Department of Corrections, State Emergency Management Agency, Missouri State Water Patrol, Missouri Department of Conservation, Office of Administration, Missouri Department of Transportation, Missouri Department of Natural Resources, Division of Fire Safety, and the Missouri Department of Mental Health.



A DHSS RSS Team member directs the efficient movement of trucks in and out of the RSS site.

Based on evaluations of planning efforts and full-scale exercises, Missouri received a high rating (green minus) from the CDC for its SNS preparedness efforts. During 2006, only 11 other states achieved a similar rating.

The DHSS video production specialist developed an SNS training video and SNS exercise documentation video, as well as emergency preparedness videos for television use in the St. Louis area.

Cities Readiness Initiative

The goal of the Cities Readiness Initiative (CRI) Program is to aid selected cities in increasing their capacity to deliver medications and medical supplies from the SNS in the event of a large-scale public health emergency. Though the goal of the CRI seems fairly straight forward, the emphasis is focused on dispensing those medications to the entire population within 48 hours. In that regard, CRI cities must plan for and collaborate on multiple levels to provide lifesaving medications early enough within the event to make a significant health impact.

The CRI requires local planners to think "outside the box" and identify nontraditional methods. Only through a combination of traditional and nontraditional methods of dispensing will the goals of the CRI be achieved. Missouri currently has two CRI cities, St. Louis and Kansas City. During 2006, an alternative dispensing guide was developed to provide a nonmedical model for public health officials. In addition, the St. Louis CRI developed two informational videos for businesses and elected officials.

CHEMPACK

To be better prepared for the potential use of chemical weapons, CDC developed a program called CHEMPACK, which will result in the 'forward' placing of large quantities of antidotes to chemical exposure throughout the nation. The nerve agent antidotes will be rapidly available to state and local emergency responders whose local resources have been exhausted. DHSS has established partnerships with hospitals, drug warehouses, and first responders for the storage of these CHEMPACK caches at 25 strategic locations throughout the state. CDC staff has visited and approved each site. Placement of the caches should be completed in Spring 2007.

Exercising Missouri's SNS Capabilities

Missouri stepped forward as the first state to conduct a bi-state SNS exercise during the Kansas City / western Missouri area exercise held in 2004, which simulated the response to a bioterrorist attack.

In 2005, DHSS held a Cities Readiness Initiative (CRI) exercise in the St. Louis / eastern Missouri area in a second bi-state effort with Illinois, which simulated an anthrax attack. The CRI exercise also proved that it is possible to provide antibiotic protection to a larger number of people in an emergency by using a less traditional dispensing model that could provide prophylaxis for at least 700 people per hour. The mission under CRI calls on the state and local public health agencies to prophylax an entire metropolitan statistical area within 48 hours or less after an attack.

In June 2006, DHSS held its full-scale SNS exercise in southwest Missouri to counter a pandemic influenza virus. This exercise met the need to both address mass dispensing of medications and also the federal Pandemic Influenza Phase I requirements to test the receipt,

staging, storage, and distribution of anti-viral medications. CERT tested the ability to receive, stage, and store more than 50 pallets of SNS Managed Inventory for the first time in addition to 15 simulated containers packed with SNS supplies. Managed Inventory makes up more than 90 percent of the SNS. Unlike the typical pack received from the CDC, which arrives in special roll-on, roll-off, marked containers, managed inventory arrives in individual pallets. Springfield-Greene County, Cedar County, Joplin-Jasper County, Taney County, St. John's Hospital, Cox Hospital, and Skaggs Hospital in Branson all operated points of dispensing (PODs) to dispense medications for the exercise. For the first time, a Volunteer Center was also tested in Springfield-Greene County, and processed 100 volunteers in less than two hours.

DHSS has also conducted rural SNS exercises in Region E, Region H, Region B and assisted with evaluation of a mass influenza clinic exercise using SNS plans, resources and partners in Region G.



Working with local public health agencies, DHSS conducted full-scale and rural SNS exercises in many regions across Missouri.

Regional Planning - Statewide

The DHSS' CERT and the nine Missouri planning regions have been working to update the public health portion of the state emergency response plans related to the Strategic National Stockpile and pandemic influenza. Planning occurs through workgroups and subcommittees made up of representatives from the public and private sectors, as well as subject matter experts, with the goal to produce functional and useful plans, protocols and guides for a public health emergency.

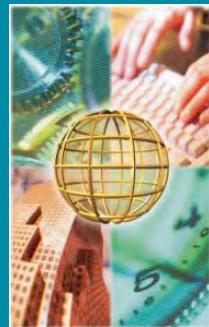
We are continuing to support the local public health agencies, their planning staff and community partners by providing direction, coordination, and technical assistance on the development, evaluation and modification of their local, multi-county, or regional plans.

The local public health agencies are continuing their work to test and implement these plans, as well as continuing with their local and regional community partnership activities. These partnerships include private businesses, hospitals, emergency management, law enforcement, fire service, emergency medical services, and other public service agencies. Through these efforts, the local public health agencies can greatly improve partnerships and integration of these plans in the community.

EMERGENCY RESPONSE Public Information Toolkit

An Emergency Response Public Information Toolkit, which includes news release templates, key messages, fact sheets, CDs, and reference materials, was provided to all local public health agencies.

EMERGENCY RESPONSE
Public Information Toolkit
for Local Public Health Agencies



Resources • Templates • Fact Sheets

Resources such as the Public Information Toolkit are available to local public health agencies.

Preparing Schools for Health Emergencies

DHSS partnered with the Missouri School Boards Association (MSBA) to create a secure, web-based tool to assist schools in planning and training for emergency events. Beginning April 2006, all schools in the state could upload critical information such as floor plans, information on students with special needs, staff information, and utility shut-off locations to aid the response to events such as infectious disease outbreaks and hazardous materials incidents. Intended to enhance existing all-hazards plans, the plans can be accessed by schools, health departments, and police, fire and other first responders through a secure Internet connection, local hard drives, Palm and Pocket PC, and downloadable print material. School districts can make changes to their plans that instantly

updates individual school plans within the district. School plans can be changed and updated by administrators and can be tracked and viewed by others who have been granted access by the school district. On-line training is available on the creation of the plans and use of the system. As they begin to use the system, schools, health departments, and other responders will gain a greater understanding of school vulnerabilities and how to prevent dangerous situations among the school-age population.

The screenshot shows a software application titled "Schools Prepared" with a sidebar menu and a main "View / Edit Plan Pages" window. The sidebar contains links for navigation, user management, site data, and plan generation. The main window displays two versions of a document side-by-side, with an arrow indicating a transition between them. A text box below the documents provides instructions on how to view or edit the plan pages.

Through the use of CDC's public health preparedness grant funding, DHSS partnered with the MSBA in 2006 to create this planning tool for Missouri schools.

As a result of the success and additional collaborations, Missouri schools, day cares, colleges, and universities will soon have the opportunity to use this tool for all-hazards planning through funding from Homeland Security.

Exercises and Trainings

Training and exercises help responders practice, build partnerships, and aid in finding problems in planning before a real situation puts people at risk. During this period, DHSS' CERT helped design, organize, evaluate, and participate in exercises across the state. These included:

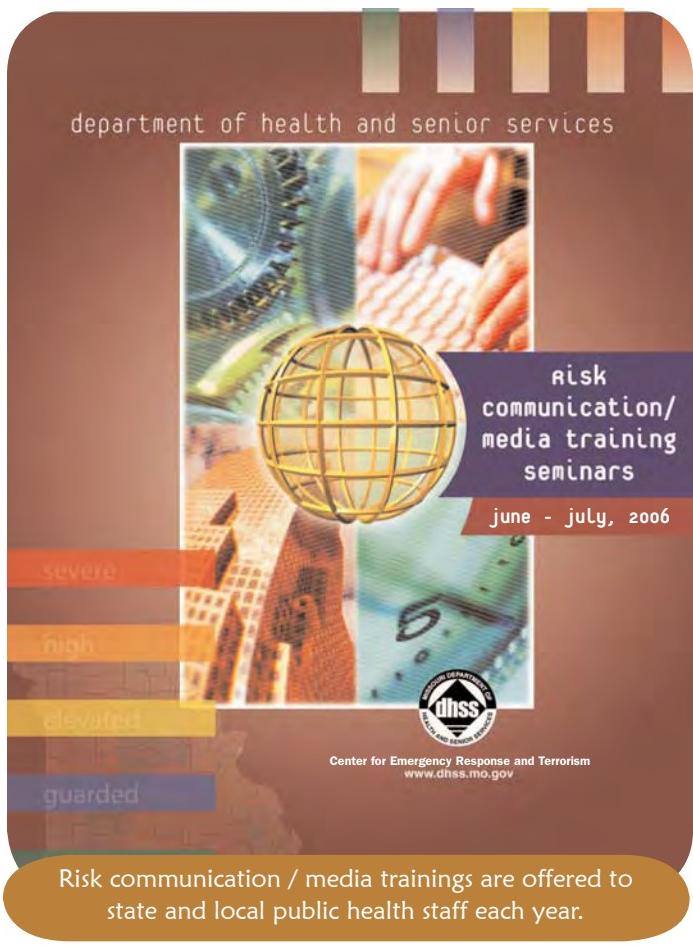
- Food-borne bioterrorism exercises in southwest and central Missouri;
- A 24-hour Department Situation Room and State Emergency Operation Center exercise that included response to biological, chemical, and radiological events;
- A regional pandemic influenza exercise in southeast Missouri;
- Support and planning for a pandemic influenza exercise in the Kansas City area;
- A SARS (Sudden Acute Respiratory Syndrome) exercise in Hannibal that included the local public health agency, local hospital, local emergency management, fire, police, as well as regional public health partners;
- A chemical and biological exercise for local public health agencies, schools, and their emergency response partners in Northwest Missouri; and
- Seminars for schools on Category A bioterrorism agents and pandemic influenza during the Missouri Center for Safe Schools Advanced School Safety Coordinator trainings.

DHSS' Distance Learning Network reaches people in remote areas with 46 satellite dishes covering every region of Missouri. A calendar of upcoming broadcasts on topics related to emergency response and various other health-related topics is updated and sent out on a weekly basis to DHSS employees and LPHAs. During this period, 156 satellite broadcasts were received, and DVDs and VHS tapes were made available to those interested in the topics covered. Another distance learning tool, eLearning, allows participants the opportunity to attend courses on-line in their offices. For example, an eight-module course, The Principles of Infectious Disease Epidemiology, provides important disease investigation information to LPHAs.

**DHSS' CERT is
actively involved
in training
Missourians who
participate in
emergency
response.**



Trainings are held with school health and public health nurses, regional local public health staff, and emergency response team members each year to assure they have the skills they need to respond to a public health emergency.



Also during this period, advanced risk communication / media trainings were offered in St. Louis, Springfield, Kansas City, and Jefferson City; and a basic Crisis and Emergency Risk Communications seminar was held in Jefferson City. State and local public health staff, hospital communications staff, and emergency personnel who work with the media were offered the training. An advanced-level media training was provided to 16 DHSS key managers who would serve as spokespersons during an emergency. In July, the DHSS Public Information Response Team and regional public information officers participated in a message-coordination training exercise. In addition, 58 Governor's cabinet-level leaders and public information officers participated in a media training focusing on pandemic influenza message coordination across state agencies. More than 200 state and local public health and hospital staff have received risk communications / media training to better prepare them to communicate to the public during an emergency.

The state and regional public information officers continue to participate in exercises and work closely on public information needs and activities throughout the state.

Public Health Preparedness Advisory Committee

The Public Health Preparedness Advisory Committee, formerly called the Bioterrorism Advisory Committee, is comprised of members from many jurisdictions, including state agencies, local public health agencies, private associations, and emergency response agencies.

Issues relating to public health preparedness, funding opportunities, and strategic planning are addressed during committee meetings. One of the committee's priorities is to review the strategic plan at each meeting to ensure public health preparedness efforts are headed in the right direction. The majority of the meetings are face-to-face, but to ensure broad participation, the option to connect by conference call is always available.

Committee Vision

A Missouri public health infrastructure that protects against all natural and man-made emergencies and disasters and plans for efficient and appropriate response to an event.

Local Public Health Agencies

During this grant year, CERT provided contracts to 112 local public health agencies for the purpose of emergency planning and enhanced communications / training. Thirty-two contractors were awarded funds to cover salaries, travel expenses, and equipment for the following positions: 29 planners, 33 epidemiology specialists, seven public information officers; and three volunteer coordinators. These 32 contractors were responsible for assisting the remaining 82 local public health agencies with the following essential services:

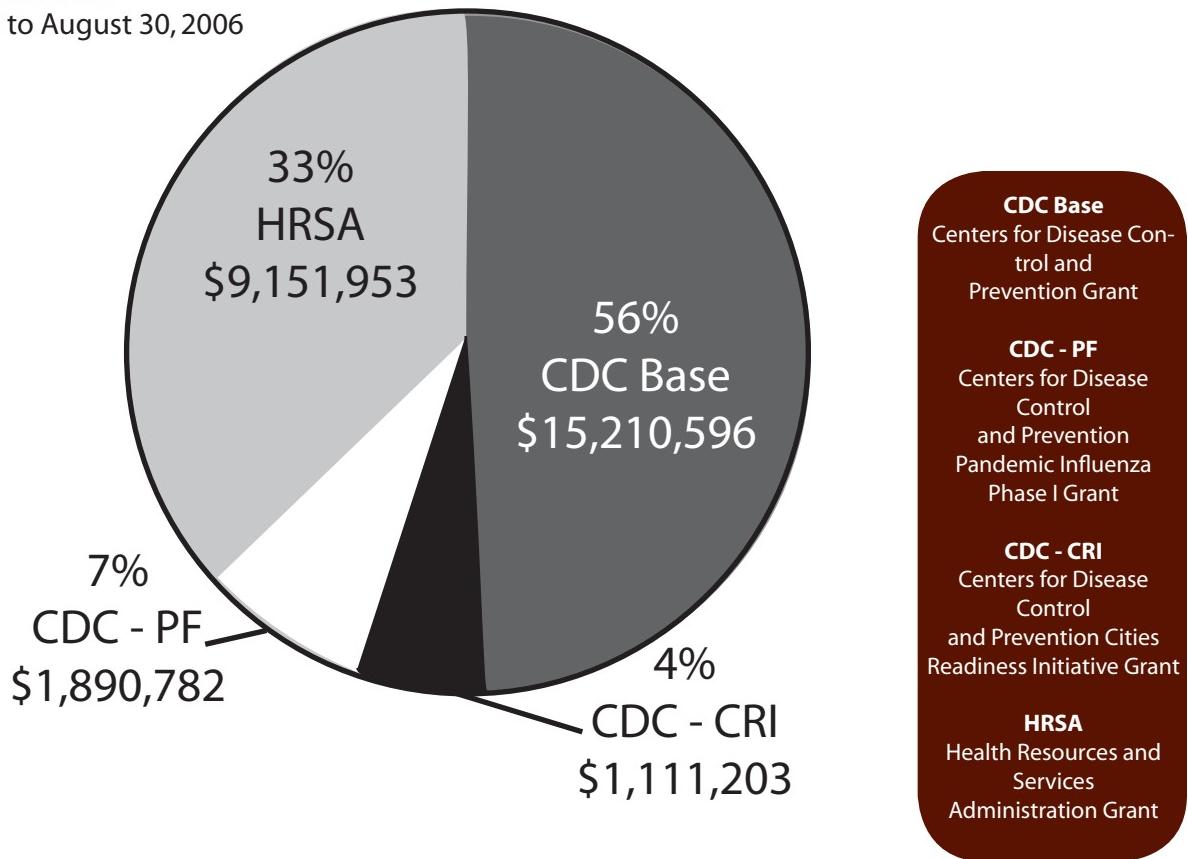
- Develop a functional local emergency plan, conduct exercises, and update plans;
- Coordinate local surveillance activities; and
- Coordinate and train local volunteers for public health emergency response and exercises.

Local public health plans are updated on an annual basis and numerous tabletop exercises are held to test these plans. Key partners, such as law enforcement, hospitals, fire, schools, businesses, faith-based organizations, and other emergency management organizations have come to the table together to discuss roles and responsibilities during an emergency event.

Annually, the Department of Health and Senior Services sponsors a full-scale Strategic National Stockpile exercise in which all 114 local public health agencies are required to participate. The remaining 82 local public health agencies, excluding the 32 bioterrorism contractors, are offered a contract to provide funding for training, travel expenses, communication enhancement, and purchasing of supplies to stock the points of dispensing locations.

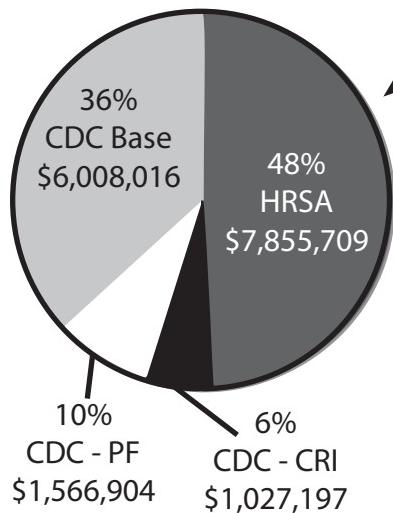
Funding Sources

September 1, 2005 to August 30, 2006

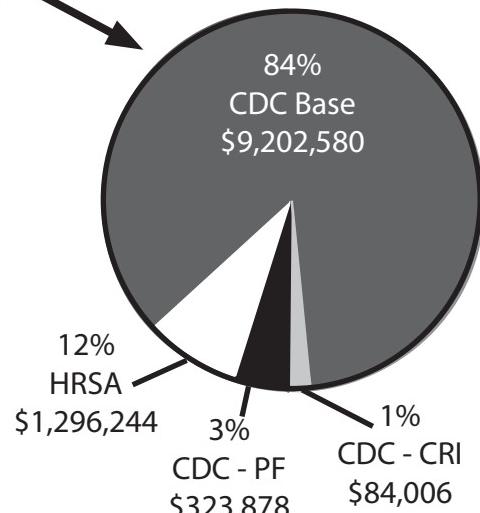


Fund Distribution

Local Communities Funding Source



State Level Funding Source

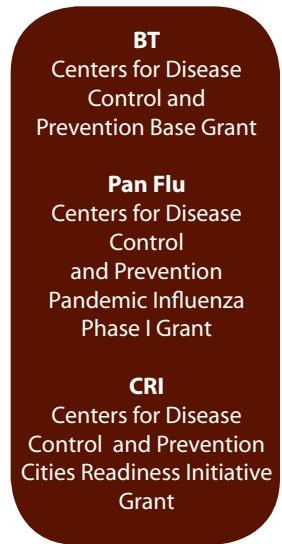


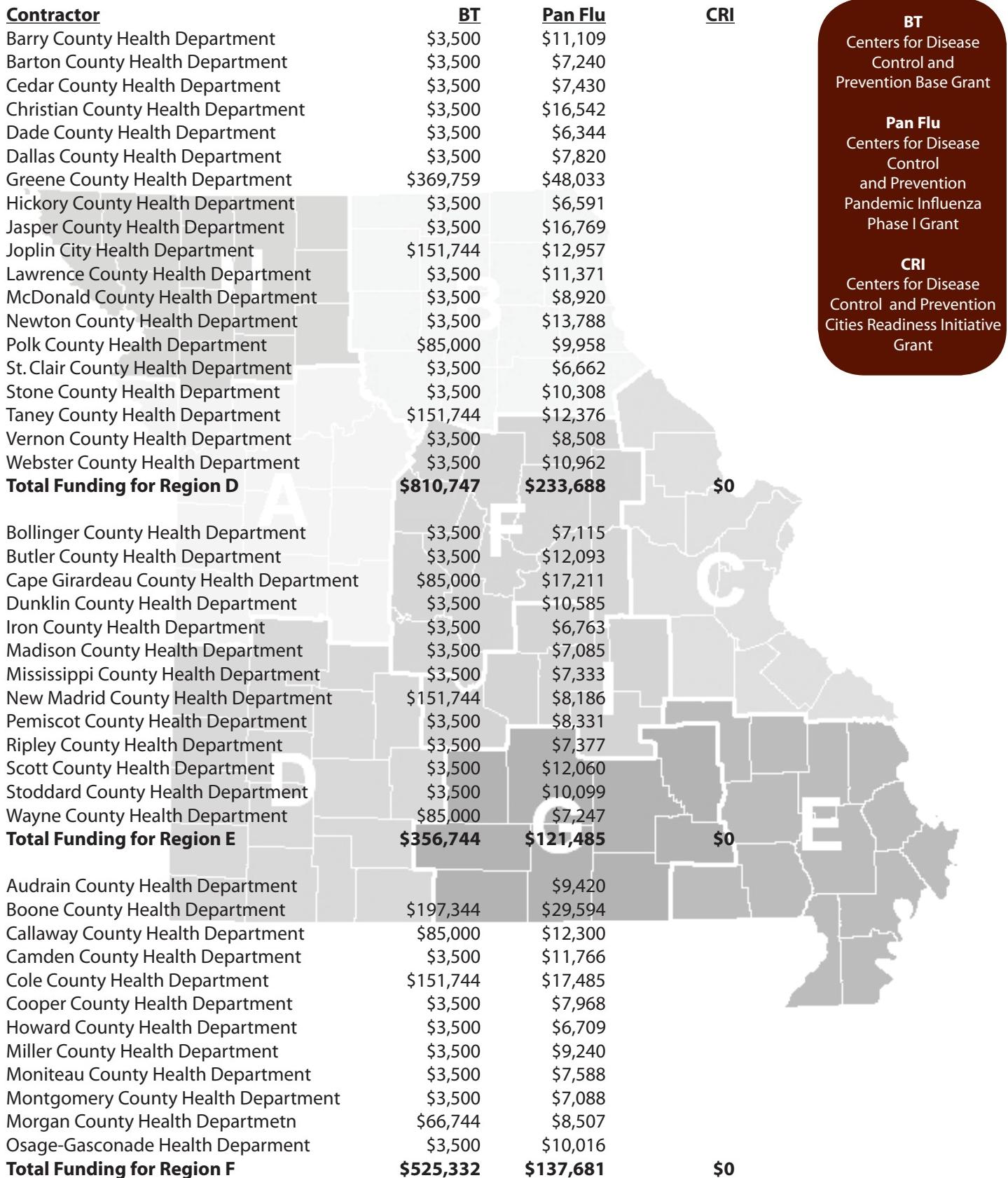
Fund Distribution by Region¹

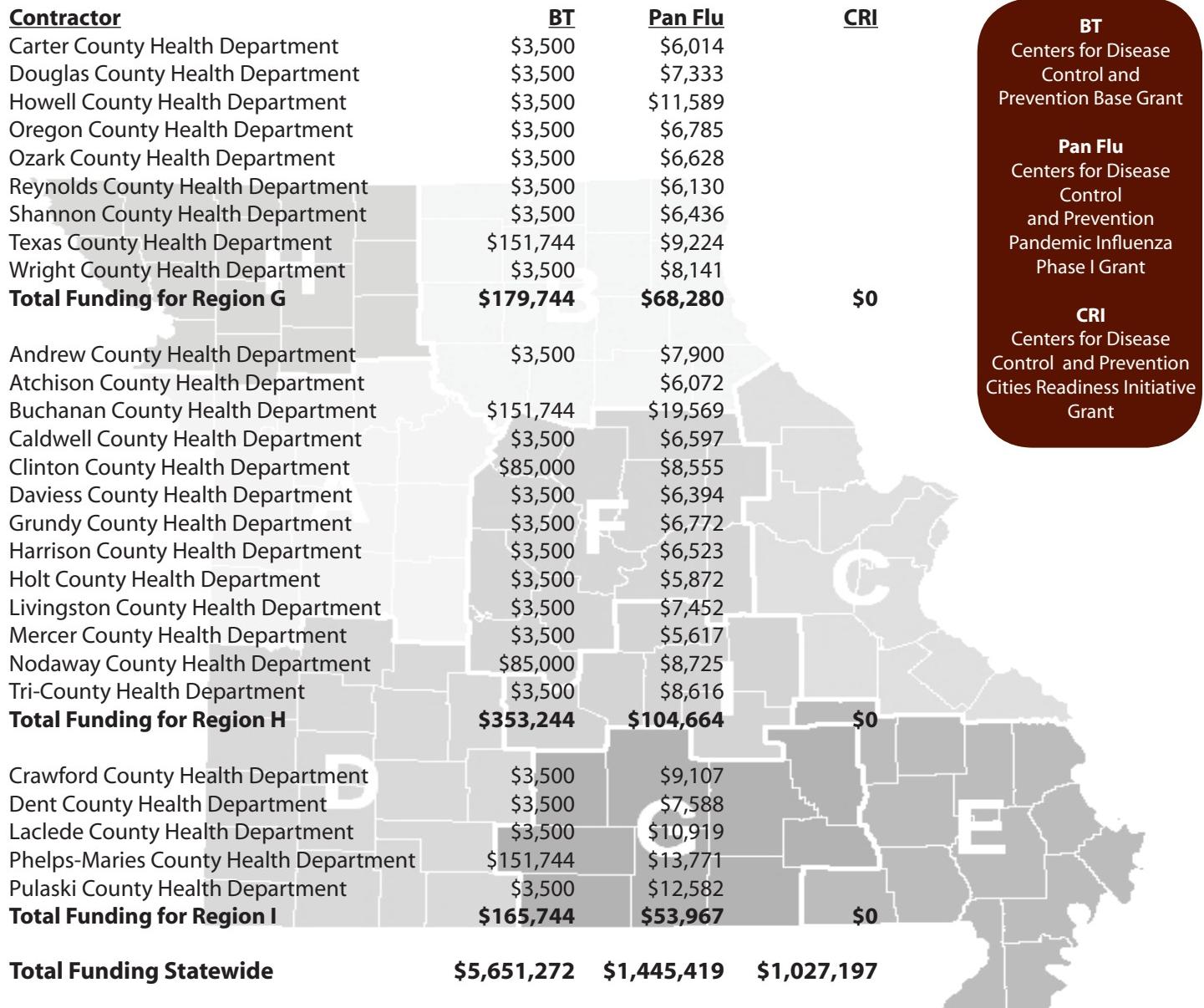
September 1, 2005 to August 30, 2006

Contractor

	BT	Pan Flu	CRI
Bates County Health Department	\$3,500	\$7,922	
Benton County Health Department	\$3,500	\$8,235	
Carroll County Health Department	\$3,500	\$6,749	
Cass County Health Department	\$151,744	\$20,811	
Clay County Health Department	\$151,744	\$25,869	
Henry County Health Department	\$3,500	\$8,874	
Independence Health Department	\$151,744	\$24,051	
Jackson County Health Department	\$151,744	\$44,384	
Johnson County Health Department	\$3,500	\$13,714	
Kansas City Health Department	\$689,859	\$80,976	
Lafayette County Health Department	\$3,500	\$10,681	
Mid-America Regional Council			\$160,594
Pettis County Health Department	\$151,744	\$11,884	
Platte County Health Department	\$130,600	\$14,201	
Ray County Health Department	\$3,500	\$9,136	
Saline County Health Department	\$3,500	\$8,960	
Total Funding for Region A	\$1,607,179	\$296,447	\$160,594
Adair County Health Department	\$151,744	\$9,206	
Chariton County Health Department	\$3,500	\$6,394	
Clark County Health Department	\$3,500	\$6,257	
Knox County Health Department	\$3,500	\$5,716	
Lewis County Health Department	\$3,500	\$6,748	
Linn County Health Department	\$3,500	\$7,254	
Macon County Health Department	\$3,500	\$7,677	
Marion County Health Department	\$85,000	\$9,869	
Monroe County Health Department	\$3,500	\$6,609	
Putnam County Health Department	\$3,500	\$5,887	
Ralls County Health Department	\$3,500	\$6,675	
Randolph County Health Department	\$3,500	\$9,347	
Schuylerville County Health Department	\$3,500	\$5,739	
Scotland County Health Department	\$3,500	\$5,846	
Shelby County Health Department	\$3,500	\$6,157	
Sullivan County Health Department	\$3,500	\$6,185	
Total Funding for Region B	\$285,744	\$111,566	\$0
East-West Gateway Coordinating Council			\$866,603
Franklin County Health Department	\$151,744	\$22,003	
Jefferson County Health Department	\$197,344	\$41,664	
Lincoln County Health Department	\$85,000	\$13,190	
Perry County Health Department	\$3,500	\$8,187	
Pike County Health Department	\$3,500	\$8,219	
St. Charles Health Department	\$197,344	\$61,615	
St. Francois County Health Department	\$85,000	\$15,581	
St. Louis City Health Department	\$294,659	\$64,090	
St. Louis County Health Department	\$694,947	\$177,394	
Ste. Genevieve County Health Department	\$3,500	\$8,123	
Warren County Health Department	\$3,500	\$9,936	
Washington County Health Department	\$3,500	\$9,124	
Total Funding for Region C	\$1,723,538	\$439,126	\$866,603







¹ The above tables represent funding received from the CDC Public Health Preparedness Grant and distributed to the counties within Missouri for services surrounding bioterrorism, pandemic influenza, and Cities Readiness Initiative planning. In addition, DHSS has distributed \$7,855,709 to local communities to develop and enhance hospital and other health care entities' capacity and capability to respond to terrorism, natural disasters, and other public health emergencies (see page 18 for further details on Health Resources and Services Administration funding information).

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